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AUTHOR Kuehn, John A.; And Others
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ABSTRACT

The direct impact of job development in new and expanded plants on individual salary and poverty reduction was studied in rural areas of Arizona, Appalachian Mississippi, the Ozarks, and the Mississippi Delta. Specific Objectives were to: indicate competitiveness between migrants and residents for new jobs; estimate the proportion of jobs which directly reduced poverty; estimate changes in employees' salaries and lifetime earnings; and estimate the local sphere of influence of job development in the labor market. In the areas studied, 25 percent of the employees in each of 26 plants were interviewed. Via cross tabulations and mean calculations, data on the study areas were analyzed relative to: (1) wage and salary employment in private nonfarm industries for 1962, 1965, and 1968 with percent of change; (2) employee residential classifications during 1965-70; (3) household income and salary rate by poverty status for 1970; (4) selected socioeconomic employee characteristics for 1970; (5) gross individual benefits from job development; and (6) employee commuting distances in 1970. Findings indicated: about 25 percent of all plant jobs in 1970 were held by employees whose households had been poor; about 16 percent of the total jobs were held by persons whose households had escaped poverty by 1970; and discounted value of the increase in employees' salaries was \$12,880, but job impact varied considerably by area. (JC)

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Agricultural Economic Report No. 225



***IMPACT OF JOB DEVELOPMENT
ON POVERTY
IN FOUR DEVELOPING AREAS, 1970***

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ABSTRACT

Direct economic impacts of job development in new and expanded plants in four developing areas within Arizona, Appalachia, the Mississippi Delta, and the Ozarks were estimated. Approximately 25 percent of all jobs in these plants in 1970 were held by employees whose households had been poor. About 16 percent of the total jobs (two-thirds of the poor) were held by persons whose households escaped poverty by 1970 in their present employment. Discounted value of the increase in employees' salaries was \$12,880. Impacts of jobs varied considerably among areas.

Keywords: Developing areas, Economic impact, Employment, Industrial development, T-case study, Arizona, Appalachia, Mississippi Delta, The Ozarks.

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HIGHLIGHTS

In 1970, about 26 percent of the jobs in new and expanded plants in developing areas of Arizona, Appalachia, the Mississippi Delta, and the Ozarks were held by employees, both residents and migrants, whose households had been poor. About two-thirds of these people escaped poverty in their present jobs. Previously poor residents accounted for 22 percent of the new jobs; previously poor migrants, for the remaining 4 percent. Impacts of new jobs varied considerably, however, by area.

Of all employees in these firms, most enjoyed real wage increases. The average was \$20.25 per week. Discounted value of workers' annual salary changes was \$12,880, also representing the average total increase in their lifetime contributions to national income.

Migrants competed directly with residents for the new jobs, but not on a large scale. Residents held approximately 77 percent of the jobs; the remainder was split between migrants and persons returning to the areas.

The labor market for the new and expanded plants drew employees from a wide area. About 40 percent of them lived 10 or more miles from their jobs. Some workers commuted over 40 miles, one-way, to work.

Some employees' households remained poor. Higher salaries, multiple wage earners, or both would be necessary to remove these people from poverty. The need for more than one earner was particularly evident in the Delta.

IMPACT OF JOB DEVELOPMENT ON POVERTY
IN FOUR DEVELOPING AREAS, 1970

by

John A. Kuehn, Lloyd D. Bender, Bernal L. Green,
and Herbert Hoover 1/

INTRODUCTION

This report considers the extent to which specific new and expanded plants directly benefited poor persons and their household members living in four developing areas of the country. Industrialization is commonly considered a major means of combating poverty by providing jobs for the underemployed and increasing household income. Many of the poor living in distressed areas are handicapped in their ability to participate in the labor force because of age, disability, or illiteracy. 2/ For those who are employable, however, industrial growth within developing areas may constitute the most satisfactory means of reducing poverty and vitalizing rural areas. 3/ Assuming they are designed to meet participants' needs, the effectiveness of public and private programs in alleviating poverty by influencing industrial location depends on responsiveness of the poor to new job opportunities. Questions arise as to who is employed by new and expanded plants located in developing areas. Do the resident poor benefit? Or do employed workers migrate to these areas when new jobs are created? Does national economic efficiency increase? This report represents an attempt to answer these questions and document the effectiveness of job development as a remedial antipoverty technique.

The overall objective of the study was to estimate direct impacts of job development in new and expanded plants on persons' salaries and poverty reduction. Specific objectives were:

- 1) To indicate competitiveness between migrants and residents for new jobs;

1/ The authors at the time of this study were all agricultural economists, Economic Development Division, Economic Research Service (ERS), U.S. Department of Agriculture (USDA). Mr. Hoover is now a member of Natural Resource Economics Division, ERS, USDA.

2/ McCoy, John L. Rural Poverty in Three Southern Regions. U.S. Dept. Agr., Agr. Econ. Rpt. 176. Mar. 1970.

3/ Edwards, Clark and Rudolph De Pass. Rural-Urban Population, Income, and Employment: A Simulation of Alternative Futures. U.S. Dept. Agr., Agr. Econ. Rpt. 218. Dec. 1971.

- 2) To estimate the proportion of jobs which directly reduced the incidence of poverty;
- 3) To estimate changes in employees' salaries and lifetime earnings; and
- 4) To estimate the local sphere of influence of job development within the labor market area.

Data were obtained by interviewing employees of new and expanded plants within four developing areas.

Four Study Areas

From data reported in County Business Patterns, published by Bureau of the Census, U.S. Department of Commerce, it was determined that some 50 counties in eight States had experienced considerable growth in nonfarm employment during 1962-68. Four areas, each comprised of contiguous multicounty units, were selected for intensive study. These were portions of the Four Corners region in Arizona, southern Appalachia, (northeastern Mississippi), the central Ozarks, and the Mississippi Delta in Arkansas. ^{4/} Each of these areas possessed distinct ethnic and cultural traditions, permitting study of differences among groups. Each contained many employable poor and was located within larger distressed regions. During 1962-68, private nonfarm employment increased 82 percent in Arizona, 52 percent in Appalachia, 59 percent in the Ozarks, and 61 percent in the Delta (table 1). From past observation much of this economic growth was known to include activities that could provide employment for low-skilled, poverty prone persons.

The Arizona study area contained a great number of unemployed persons and possessed unique Southwest cultures. Population of the two counties studied was decidedly Hopi, Navajo, and Apache Indian; and most production line employees were American Indians. The area was in an initial state of industrial development with very few firms bidding for labor services. The four firms participating in the survey included apparel, electronics assembly, and retail trades operations. The area has experienced considerable population growth; unemployment has been high.

The Appalachian study area in Mississippi has fostered nonfarm industries for several decades. The labor market has drawn heavily on the surrounding hinterland for workers. The eight firms surveyed included apparel, shoe, electrical, and plastic industries. The area is predominantly white and rural oriented. Population declined steadily between 1940 and 1960. Past employment opportunities in local industries were mainly for females, but recent industrial development has utilized more males.

The Ozarks study area in northwestern Arkansas has likewise fostered non-farm industries for at least two decades. With industrial growth, less emphasis

^{4/} Hereafter referred to as Arizona, Appalachia, the Ozarks, and the Delta.

Table 1.--Wage and salary employment in private nonfarm industries,
by study area, selected periods, 1962-68

Study areas and counties	1962	1965	1968	Change	
				1962-68	1965-68
	<u>Number</u>			<u>Percent</u>	
Arizona:					
Apache, Ariz.	1,812	2,150	5,564	207.1	158.8
Navajo, Ariz.	3,617	3,867	4,295	18.7	11.1
Total	5,429	6,017	9,859	81.6	63.9
Appalachia:					
Alcorn, Miss.	4,581	5,635	6,598	44.0	17.1
Tippah, Miss.	1,552	2,216	2,704	74.2	22.0
Total	6,133	7,851	9,302	51.7	18.5
Ozarks:					
Benton, Ark.	6,912	8,200	11,464	65.9	39.8
Washington, Ark. .	10,970	14,358	16,917	54.2	17.8
Total	17,882	22,558	28,381	58.7	25.8
Delta:					
Cross, Ark.	1,533	1,886	2,520	64.4	33.6
Lee, Ark.	1,120	1,214	1,595	42.4	31.4
St. Francis, Ark. :	3,287	4,576	5,462	66.2	19.4
Total	5,940	7,676	9,577	61.2	24.8

Source: Adapted from County Business Patterns reports for 1962, 1965, and 1968, Bur. of the Census, U.S. Dept. Commerce.

has been placed on the traditional "foot-loose" industries. ^{5/} Recent industries in the area have tended to be more diversified and have offered employment opportunities, mainly to skilled males. The 11 plants surveyed included apparel, agribusiness, steel fabricating, and plumbing industries. The study area was moderately urbanized in contrast to surrounding rural areas. During the sixties, the Ozarks grew substantially in population and is chiefly white. Its natural resources attract tourists, recreationists, and retirees.

The Delta study area was a relative newcomer in receiving light industry. The three firms surveyed included apparel and metal fabricating industries. The area's labor market encompassed many nearby underemployed farm workers. Approximately 45 percent of the farms were operated by tenants in 1964. Underemployment has been estimated at 40 to 45 percent of the total man-years of the civilian labor force. Population declines and high outmigration have occurred. Forty-five percent of the population was nonwhite in 1970.

^{5/} Term refers to industries whose small fixed plant investment enables them to move readily to another location.

Research Methods

In these four study areas, 56 plants were identified which had 20 or more employees in 1969 and had either been established or had experienced considerable expansion since 1965. Of these, 26 plants agreed to cooperate in the study. Cooperating plant managers were asked to allow at least 25 percent of their employees, including management, to be interviewed. Interviews were conducted in groups when permitted; otherwise, sampled employees were asked to take the questionnaires home and return them. The 25-percent sample was drawn randomly within skill strata. However, the return rate varied by plant, especially where group interviewing was not allowed. For all areas together, approximately 19 percent of total estimated employees returned usable questionnaires. The questionnaire was based on questions and data normally obtained by State employment security offices. (Form ESD-Ark-311 W (7-63) was used as a guide.)

Cross tabulations and various mean calculations of sample data were made for each plant separately. Cross tabulations were expanded by plant to obtain total estimated employment. Because the sampling ratio varied for each plant, the expansion factor also varied for each plant and included undetermined responses. Area cross tabulations represented a summation of expanded data for the plants therein. Mean calculations were computed from individual plant means weighted by the relevant expanded population estimate for each plant.

MIGRANTS VERSUS RESIDENTS

Considerable discussion has evolved concerning industrialization as a policy for alleviating poverty and the impact of this policy on migration. Bryant hypothesized that in-migrants might be of major importance in reducing effectiveness of job development in eliminating local poverty. ^{6/} The question of whether migrants intervene between resident poor and new jobs is answered only tentatively here, and further analysis is needed.

Overall, migrants competed on a limited scale for new jobs with local residents. Residents consisted of nonmovers and movers within the study areas only between June 1965, and the end of 1970. Migrants included all those who moved for the first time into the study area after June 1965. Returnees represented persons who moved into the study area but had lived there before. Approximately 77 percent of the jobs were held by residents; the remainder was split between migrants and returnees (table 2). However, considerable differences existed among areas. For example, in Arizona, about three-fourths of the jobs were held by residents; migrants held one-eighth and returnees, one-eighth. Except for some management personnel, most migrants and returnees were American Indians, probably attracted by traditions of the Indian community and job availability. In Appalachia, residents held about four-fifths of the jobs; most of the remainder were held by returnees. In the Ozarks, migrants competed most seriously with residents. Only two-thirds of the jobs were held by residents;

^{6/} Bryant, W. Keith. Industrialization as a Poverty Policy. In Papers on Rural Poverty, Agr. Policy Inst. Series 37, N.C State Univ. Mar. 1969.

Table 2.--Classification of employees, four study areas, 1965-70

Study area	Classes <u>1/</u>			Undetermined	Total
	Residents	Migrants	Returnees		
----- <u>Number 2/</u> -----					
Arizona	948	173	132	17	1,270
Appalachia ..	2,103	131	339	27	2,600
Ozarks	1,332	372	252	24	1,980
Delta	808	38	33	0	879
Combined ..	5,192	713	756	67	6,729
----- <u>Percent 3/</u> -----					
Arizona	74.7	13.6	10.4	1.3	100.0
Appalachia ..	80.9	5.0	13.1	1.0	100.0
Ozarks	67.3	18.8	12.7	1.2	100.0
Delta	91.9	4.3	3.8	0.0	100.0
Combined ..	77.2	10.6	11.2	1.0	100.0

1/ Residents included nonmovers and movers within the study area only between June 1965, and the end of 1970. Migrants included all those who moved into the study area for the first time. Returnees were persons who moved into the study area but had lived there before.

2/ Items may not add to total because of rounding; sample expanded by plants.

3/ Percentages calculated from unrounded data.

almost a fifth were held by migrants and an eighth, by returnees. This area possessed several resources that attracted persons for relatively noneconomic reasons. 7/ In the Delta, migrants and returnees represented only small proportions of total estimated employment at plants surveyed.

DIRECT IMPACTS ON POVERTY

Poverty thresholds for households were defined as \$2,000 for the first member (employee) plus \$600 for each additional member per year. 8/ Some double counting might have occurred if more than one household member was employed at a surveyed firm. Changes in poverty status were based on annual household income in 1970 in the present job versus annual household income in the most recent previous job held. If no such job existed, 1965 household income was used for comparison. All incomes were inflated to a 1970 base year with the Consumer Price Index (CPI) to remove effects of yearly variations in price levels. The 1970 household size was used for poverty calculations.

7/ Green, Bernal L., Lloyd D. Bender, and Rex R. Campbell. Migration Into Four Communities in the Ozarks Region, Univ. Ark., Bul. 756. June 1970.

8/ Poverty income thresholds were provided by Mrs. Patricia Koshel, Off. of Research and Evaluation, Off. of Econ. Opportunity, Dec. 16, 1970.

The poor participated directly in jobs created by new and expanded plants. Sixty-four percent of employees whose households had been previously poor escaped poverty in their present employment. Overall, 25 percent of the jobs for which a poverty status was determinable were held by employees, both residents and migrants who had been poor (table 3). Twenty-two percent of the jobs went to residents who had been previously poor. Not all poor employees escaped poverty in their present jobs; additionally, 3 percent of the jobs were held by employees moving into poverty.

Among the four study areas, the degree of impact of job development apparently varied directly with the quantity of unemployment and underemployment and varied inversely with the level of nonfarm development. The Delta and Arizona had considerable underemployment and their industrial development was in the beginning stage. Previously poor employees held about half the jobs; those escaping poverty in their employment accounted for about a fourth of the jobs. In the Delta, residents had most of the jobs; in Arizona, migrants and returnees accounted for a sizable share of all employment. Appalachia and the Ozarks had low unemployment and underemployment and a more developed industrial economy than did the other two study areas. Only about a fifth of all jobs were held by people previously poor and about an eighth by those escaping poverty in their present employment.

On the average, in all four areas, nonpoor employees earned weekly salaries in 1970 that, if maintained for a full year, would have been sufficient to keep their households out of poverty (table 4). In each area, nonpoor employees belonged to households with incomes that were greater than annualized salaries of these workers. This difference probably reflected the fact that about half these employees had employed spouses. In the aggregate, these second wage earners were not necessary to keep the nonpoor out of poverty.

On the average, employees who were poor in the four study areas had weekly salaries in 1970 which, if earned for a full year, would not have been sufficient to keep their households out of poverty. In Arizona, Appalachia, and the Ozarks, poor workers received lower salaries and had more household members than nonpoor workers. In the Delta, poor and nonpoor persons received approximately the same salaries but households of the poor were over twice the size of those of the nonpoor.

In Arizona, Appalachia, and the Ozarks, annualized salaries of poor persons were greater than their household incomes, despite the fact that some of them had working spouses. Poor employees apparently did not work a full year. In Arizona, a high turnover rate existed. Possibly, job sharing was a form of income sharing within the traditional Indian community. In Appalachia and the Ozarks, lower annualized salaries could reflect operating schedules of garment and food processing plants. In the Delta, the poor had annualized salaries which approximated their household incomes. However, over a third of the Delta poor also had working spouses. Given employees' mean household sizes, the poor in Arizona, Appalachia, and the Ozarks would require higher salaries for a full year's work, employed spouses, or both to escape poverty. But in the Delta, with its relatively equalized salaries, employed spouses would be required for poor households to escape poverty.

Table 3.--Net impact of job development on poverty status, four study areas, 1965-70

Area and poverty status	Jobs <u>1/</u>	As percentage of total jobs <u>2/</u>	As percentage of deter- mined jobs <u>2/ 3/</u>
	Number	Percent	Percent
Arizona:			
Total number of jobs	1,270	100.0	--
Number of determined jobs <u>2/</u> ..	373	29.4	100.0
Total previously poor	183	14.4	49.1
Residents previously poor	121	9.5	32.4
Total escaping poverty	93	7.3	24.9
Residents escaping poverty	58	4.6	15.5
Total moving into poverty	8	0.6	2.2
Residents moving into poverty ..	5	0.4	1.4
Appalachia:			
Total number of jobs	2,600	100.0	--
Number of determined jobs <u>2/</u> ..	2,368	91.1	100.0
Total previously poor	441	16.9	20.6
Residents previously poor	401	15.4	16.9
Total escaping poverty	315	12.1	13.3
Residents escaping poverty	281	10.8	11.8
Total moving into poverty	69	2.7	2.9
Residents moving into poverty ..	56	2.1	2.3
Ozarks:			
Total number of jobs	1,980	100.0	--
Number of determined jobs <u>2/</u> ..	1,572	79.4	100.0
Total previously poor	310	15.7	19.8
Residents previously poor	228	11.5	14.5
Total escaping poverty	219	11.0	13.9
Residents escaping poverty	142	7.2	9.1
Total moving into poverty	73	3.7	4.6
Residents moving into poverty ..	44	2.2	2.8
Delta:			
Total number of jobs	879	100.0	--
Number of determined jobs <u>2/</u> ..	809	92.0	100.0
Total previously poor	389	44.3	48.1
Residents previously poor	370	42.1	45.8
Total escaping poverty	220	25.0	27.2
Residents escaping poverty	201	22.9	24.8
Total moving into poverty	9	1.0	1.1
Residents moving into poverty ..	9	1.0	1.1
Combined:			
Total number of jobs	6,729	100.0	--
Number of determined jobs <u>2/</u> ..	5,122	76.1	100.0
Total previously poor	1,323	19.7	25.8
Residents previously poor	1,120	16.6	21.9
Total escaping poverty	847	12.6	16.5
Residents escaping poverty	682	10.1	13.3
Total moving into poverty	159	2.4	3.1
Residents moving into poverty ..	114	1.7	2.2

1/ Sample expanded by plants, rounded to whole numbers.2/ Jobs enumerated for which a poverty status in both time periods was determinable.3/ Usage of these percentages assumed that sampled responses were typical of unsampled employees and sampled refusals by plant. Percentages based on unrounded data.

Table 4.--Household income and salary rate, by poverty status, four study areas, 1970

Study area	Out of poverty, 1970					
	Jobholders 1/	Mean household income	Mean weekly wage	Mean household size	Percentage with employed spouse 2/	
	Number	Dollars	Dollars	Number	Percent	
Arizona	565	7,518	93	4.3	40.5	
Appalachia	2,297	7,871	100	3.5	57.3	
Ozarks	1,666	8,223	98	3.5	50.2	
Delta	682	7,005	99	4.0	52.5	
Combined	5,210	7,832	99	3.7	52.6	
In poverty, 1970						
Arizona	485	2,905	63	6.5	26.4	
Appalachia	210	2,926	73	5.2	33.5	
Ozarks	244	2,760	74	4.7	12.9	
Delta	178	5,033	97	8.4	37.4	
Combined	1,117	3,217	73	6.2	26.3	
Total 1970 3/ 4/						
Arizona	1,270	5,445	78			
Appalachia	2,600	7,425	97			
Ozarks	1,980	7,485	95			
Delta	879	6,552	99			
Combined	6,729	6,955	93			

- 1/ Sample expanded by plants; all mean calculations weighted by plant and based on unrounded data.
2/ Includes only persons with known employed spouses; percentage based on total, including undetermined.
3/ These overall totals include those whose poverty status was not determinable.
4/ Respondents' means were assumed typical by plant of both unsampled jobholders and sampled jobholders and sampled refusals.

In all four areas, poor workers had lower household incomes, larger household sizes, and fewer employed spouses than nonpoor workers. In every area, the poor also received lower salaries. The incidence of poverty was greatest in Arizona, where poor workers received very low salaries compared with other areas. The Delta had the second highest incidence of poverty, most probably caused by large household sizes of the poor. In each area studied, the poor would benefit financially if more households had second wage earners.

An area in the early stages of industrialization often attracts firms employing a high proportion of female employees. Also, women's salaries have frequently been low compared with men's. Lastly, households in which the primary wage earners are women have often tended to be poor. Significantly, about 72 percent of employees studied in Arizona were women (table 5). This fact, coupled with low percentages of employees with working spouses, provided at least one reason for the high incidence of poverty in Arizona. Other poverty prone characteristics were evident in all four areas. For example, some employees had low job mobility and low levels of formal education, despite the fact that most of them were fairly young.

Table 5.--Selected socioeconomic characteristics of employees,
four study areas, 1970 ^{1/}

Study area	Females	Mean age ^{3/}	Mean number of jobs, 1965-70 ^{3/4/}	Mean years of formal education ^{3/}
	Percent	Years	Number	Number
Arizona	72.9	29.4	1.7	9.7
Appalachia ^{2/}	34.8	32.8	2.1	10.6
Ozarks	44.5	33.6	2.1	11.2
Delta	15.7	33.5	1.8	9.3
Combined ^{2/}	42.4	32.5	2.0	10.4

^{1/} Sample expanded by plants. All mean calculations are weighted by determined responses by plant and based on unrounded data.

^{2/} Percentage based on total number of employees, including undetermined.

^{3/} Weights by plant excluded undetermined employees.

^{4/} Includes present job in 1970.

LABOR'S PECUNIARY GAINS

In all areas studied, most employees received real salary increases with their present employment. The CPI was used to inflate all salaries to a 1970 base. The mean increase in real weekly wages was \$36.36 in Arizona, \$16.63 in Appalachia, \$11.89 in the Ozarks, and \$26.56 in the Delta. However, these increases reveal only part of the gain to individuals and the Nation's current labor resources. Lifetime gain to these employees depended also on their ages. Younger employees would benefit more from identical salary increases than would older employees with fewer productive years remaining.

Gross monetary benefits to each person were estimated by calculating the present value of his salary change according to the formula:

$$B_1 = \sum_{t=1}^T \frac{50S - 50S_b}{(1+r)^t} \quad \text{where}$$

B_1 = Individual gross benefit,

T = Productive lifespan remaining to age 65,

S_n = Weekly salary rate in present job,

S_b = Weekly salary rate in first previous job;
zero if no previous job since 1965,

r = 8 percent annual discount rate.

Sample results were expanded by plant, and area means were computed. Use of the formula assumed that employees continued in their present jobs until age 65 and received no additional salary increases (decreases) in the future greater (less) than those they would have received in their previous jobs. Full-time employment of 50 weeks was also assumed. Future increases in labor productivity and upgrading of job skills were ignored.

Discounted earnings varied considerably among the four study areas (table 6). Greatest contrasts were provided by the Arizona and Delta study areas. Arizona had the highest mean present value of \$22,239 per employee. Almost half the employees had not been employed previously and experienced a mean increase of \$36,869 in lifetime earnings. The Delta had the second highest mean present value -- \$14,991 per employee. This large gain came from the sizable majority of Delta employees with previous employment -- probably under-employment. Each employee's lifetime gain was expected to be \$10,849 in salary. The Delta's high mean present value was primarily caused by wage increases for those previously employed. Arizona's high gain largely represented jobs of persons never before employed.

These same present value measures could also be considered a longrun component of national income. Magnitude of national income, as presently defined, depends largely on private returns to capital and labor resources. Mean present value measures of salary changes represent average increase in present employees' lifetime contributions to national income. For example, the labor resource in Arizona added \$22,239 per employee to lifetime national income by employment in new and expanded plants. If entrepreneurs freely chose their plant locations without Government subsidies, areas could be ranked by their employees' mean contribution to national income. If entrepreneurs received Government subsidies to offset capital losses incurred by locating in a suboptimal site, areas could be ranked by employees' mean contribution to national income reduced by the subsidy per employee. If past trends are indicative, future investments in new and expanded plants should be located in areas where the adjusted mean present value of labor's change in earnings is greatest. In this study,

Table 6.--Gross individual benefits from job development, four study areas, 1970

Study area	Previously employed, 1965-70		Not previously employed, 1965-70		Total, 1965-70	
	Mean present value $\frac{2}{1/}$		Mean present value $\frac{2}{1/}$		Mean present value $\frac{2}{1/}$	
	Jobholders $\frac{1}{1/}$	Dollars	Jobholders $\frac{1}{1/}$	Dollars	Jobholders $\frac{1}{1/}$	Dollars
Arizona	534	7,791	518	36,869	1,270	22,239
Appalachia	2,185	5,442	272	45,570	2,600	9,833
Ozarks	1,316	5,812	181	45,384	1,980	9,939
Delta	644	10,849	69	53,558	879	14,991
Combined	4,679	6,558	1,040	41,726	6,729	12,880

1/ Sample expanded by plants; all mean calculations are weighted by plant and based on unrounded data.

2/ Means are based on respondents' salary changes discounted at 8 percent for remaining years in the labor force until age 65 is reached.

3/ Includes those whose previous employment status or salaries could not be determined.

4/ Respondents' means were assumed typical of both unsampled jobholders and sampled refusals by plant.

Arizona, followed by the Delta, evidenced the largest increases in labor's average contributions to national income.

However, national income accounting is basically a summation of private earnings and benefits. Estimating the social benefit of job development programs would require data and information about indirect and induced effects, externalities, reductions in welfare payments, economies associated with population distribution, and so forth. Also, costs and benefits of concurrent job training need to be known. And, most importantly, maximization of national income without regard to fixed input constraints assumes the value judgment that it is best if more people work to produce more goods. 9/

LABOR MARKET AREA

None of the four areas studied contained a city of metropolitan class. Most plants were located in towns and small cities. Investigation of commuting patterns indicated that about 37 percent of employees lived within 4 miles of the plant and about 40 percent lived 10 or more miles away (table 7). In all areas except the Delta, some employees commuted more than 40 miles each way to work. Apparently, the labor market for new and expanded plants within developing areas was geographically extensive, with both urban and rural residents participating in job development.

IMPLICATIONS

This report represents a pilot effort to determine impacts of job development on impoverished households. Consequently, plants and respondents surveyed constitute only a small fraction of all of the new and expanded plants and their employees. Inferences can be made about the impacts of job development on the poor in specific ethnic groups and areas; but effects of specific types of industry on these or other areas of the Nation cannot be statistically estimated from information given here.

The study areas generally had high incidences of poverty in their labor-sheds. Thus, potential of job development for alleviating poverty might be overstated for more affluent areas or in situations where the poor are mainly unemployable -- for example, the elderly and disabled.

Conducted in 1970, the study constitutes a "time slice" reflecting national and regional business conditions. During expansionary economic conditions, a higher proportion of marginally employable applicants may be hired than during recessionary conditions. Thus, study findings may also reflect overall economic conditions as of 1970.

Any measure of total equity and efficiency gains would need to include several items not reported here, namely, impact of additional indirect and induced growth on the poor. Who took the jobs vacated by employees now in new

9/ Winch, D.M. Analytical Welfare Economics. Baltimore, Md., Penguin Books, Inc. 1971, pp. 16-25.

Table 7.--Employees' commuting distances one way, four study areas, 1970

Study area	One-way mileage					Undetermined	Total
	0-4	5-9	10-19	20-29	30-39	40 or more	
	Number 1/						
Arizona	648	252	64	72	117	106	1,270
Appalachia	804	652	779	314	34	8	2,600
Ozarks	833	413	491	168	52	12	1,980
Delta	224	191	331	63	51	0	879
Combined	2,509	1,507	1,666	617	254	126	6,729
	Percent 2/						
Arizona	51.0	19.8	5.0	5.7	9.2	8.3	100.0
Appalachia	30.9	25.1	30.0	12.1	1.3	0.3	100.0
Ozarks	42.1	20.8	24.8	8.5	2.6	0.6	100.0
Delta	25.5	21.7	37.7	7.2	5.8	0.0	100.0
Combined	37.3	22.4	24.8	9.2	3.8	1.9	100.0

1/ Items may not add to totals because of rounding; sample expanded by plants.

2/ Percentages calculated from unrounded data.

and expanded plants? How many additional jobs were fostered in other occupations and industries? This report does not consider such questions, nor does it discuss economies and diseconomies associated with population concentration and distribution. Location of job development programs might significantly affect distribution of employees and their households. If population redistribution becomes a policy goal, job development programs could represent a primary technique. 10/

Study findings indicate a continuous monitoring of job development impacts throughout the Nation would be valuable. A questionnaire similar to the one used in this study could be distributed by local employment security offices. Data could be compiled in formats like tables 3 and 6. Program administrators primarily interested in equity could compare various areas based on employees' poverty status. Administrators primarily interested in efficiency could rank areas based on employees' salary changes.

10/ Fuller, Theodore E. Trends in Manufacturing Among Small Centers of Pennsylvania. Pa. State Univ. Bul. 788. Dec. 1971, pp. 21-23.